Maine Woods Pellet Company, LLC
Somerset County
Athens, Maine
A-989-71-A-N (SM)

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., § 344 and § 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Maine Woods Pellet Company, LLC (MWP) of Athens, Maine has applied for an Air Emission License permitting the operation of emission sources associated with their new wood pellet manufacturing facility.

B. Emission Equipment
The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximun Production Rate ODT/hr	Maximum Firing Rate BD lb/hr	Fuel Type	Stack #
Dryer #1	50	14.4	6250	Wood	1

Process Equipment

Equipment	Pollution Control Equipment	Stack #
Dryer Cyclone	Wet Scrubber	1
Milled Material Cyclone	Baghouse	2
Dust Recovery Cyclone	Baghouse	2

C. Application Classification

The new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005). MWP has accepted production limitations to maintain minor source status. Therefore, the Department has determined that MWP is a new synthetic minor source and the application has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

Process Description

The wood pellet process begins with hardwood and softwood chips being fed from hoppers through the chip hammermill to reduce them to a size more appropriate for drying. The milled chips are then fed into the dryer where they go from approximately 50% moisture down to approximately 10% moisture. The Dryer is fueled with dried wood using a small amount of LP Gas as a flame stabilizer. From the dryer, the material moves to the Dryer Cyclone where the material suitable to be processed into pellets is separated from the fines and other unusable materials. The exhaust passes through a Ducon wet scrubber before being vented to the atmosphere.

The acceptable material proceeds through a second hammermill to the Milled Material Cyclone. Here the wood product is further separated to remove unusable material generated in the second milling. The exhaust from the Milled Material Cyclone is sent through a baghouse before being vented to the atmosphere.

After the Milled Material Cyclone, a portion of the dry wood product is taken to be used as fuel in the dryer. The remainder is sent to the three pellet mills where they are processed into wood pellets. The finished product then proceeds to be bagged or loaded for bulk distribution. The pellet mill and the bagging and distribution areas are controlled for dust using the Dust Collection Cyclone. The material collected from this cyclone is sent to the dryer as fuel. The exhaust is sent through the same baghouse as the Milled Materials Cyclone.

B. Dryer and Dryer Cyclone

The dryer has a rated maximum heat input capacity of 50 MMBtu/hr and fires wood dried to 10% moisture as fuel. The dryer also fires a small amount of LP Gas as a flame stabilizer. The exhaust from the dryer flows through the Dryer Cyclone and then the exhaust from the cyclone flows through a Ducon wet scrubber (95% control efficiency) before being vented to the atmosphere. In order to remain a minor source, MWP has accepted an operating limit of 4900 hours on a 12 month rolling total.

A summary of the BACT analysis for the Dryer and the Dryer Cyclone is the following:

1. PM/PM_{10}
   General Process Source Particulate Emission Standard, 06-096 CMR 105 (last amended November 3, 1990) regulates PM emission limits from the wet scrubber exhaust stack. However, a PM emission limit of 0.10 lb/MMBtu is more stringent and shall be considered BACT. The use of a wet scrubber for the control of PM shall be considered BACT. MWP shall test the scrubber stack for PM within 12 months of the effective date of this License for compliance purposes. The PM_{10} limits are derived from the PM limits.
2. SO_2, NO_x, and CO emission limits from the Dryer Cyclone are based upon testing data provided by the manufacturer when firing 95% wood and 5% LP Gas.
3. The VOC emission limit of 20 lb VOC/hr is based on other units of similar size and age. MWP shall test the scrubber stack for VOCs within 12 months of the effective date of this License for compliance purposes.
4. MWP shall be limited to firing 150,000 gallons of LP Gas on a 12 month rolling total, in the dryer. Records from the supplier documenting quantity delivered shall be maintained on a 12 month rolling total basis, for compliance purposes.
5. Visible emissions from the wet scrubber exhaust stack shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2), six (6) minute block averages in a continuous 3-hour period.

C. Milled Material Cyclone and Dust Recovery Cyclone

The Milled Material Cyclone separates the dried material that is suitable for pellet making from the non-usable material. The Dust Recovery Cyclone collects fugitive dust from the pellet processing, bagging, and bulk distribution operations, and delivers the collected material to the Dryer as fuel. Both cyclones vent to a single baghouse which is rated at 99% control efficiency. The baghouse shall be considered BACT for the control of PM and PM_{10} from the Milled Material and Dust Recovery Cyclones.

1. PM emission rates from each cyclone are based on data supplied by the manufacturer. The PM emission limits from the baghouse are calculated from the cyclone PM emissions and the rated control efficiency of the baghouse. The PM_{10} limits are derived from the PM limits.
2. Visible emissions from the baghouse shall not exceed 10% opacity on a six (6) minute block average.
3. Records of any maintenance performed on the baghouse shall be kept.

D. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

E. General Process Emissions

Visible emissions from any general process source (conveyors, hoppers, etc…) shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1), six (6) minute block average in a 1-hour period.

F. Annual Emissions

1. MWP shall be limited to 4900 hours of operation on a 12 month rolling total.
2. MWP shall be limited to firing 150,000 gallons of LP Gas on a 12 month rolling total.
3. MWP shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Dryer and Dryer Cyclone (from the wet scrubber stack)	12.3	12.3	12.5	12.3	37.0	49.0
Milled Material and Dust Recovery Cyclones (from the baghouse)	1.2	1.2	-	-	-	-
Total TPY	**13.5**	**13.5**	**12.5**	**12.3**	**37.0**	**49.0**

* All emissions are based on continuous operation.

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

The Department hereby grants Air Emission License A-989-71-A-N subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned

changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate

under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Dryer and Dryer Cyclone**

A. MWP shall be limited to 4900 operating hours on a 12 month rolling total. A written log documenting operating hours shall be maintained for compliance purposes. [06-096 CMR 115, BACT]

B. MWP shall be limited to firing 150,000 gallons of LP Gas on a 12 month rolling total, in the Dryer. Records from the supplier documenting quantity delivered shall be maintained on a 12 month rolling total basis, for compliance purposes. [06-096 CMR 115, BACT]

C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Dryer and Dryer Cyclone (from the wet scrubber stack)	PM	0.10	06-096 CMR 105(3), BACT

D. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Dryer and Dryer Cyclone (from the wet scrubber stack)	5.0	5.0	5.1	5.0	15.1	20.0

E. Visible emissions from the wet scrubber exhaust stack shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2), six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101, BACT]

F. MWP shall conduct PM and VOC testing on the wet scrubber stack to ensure compliance within 12 months of the effective date of this License. [06-096 CMR 115, BACT]

(17) **Milled Material Cyclone and Dust Recovery Cyclone**

A. The Milled Material and Dust Recovery Cyclones shall vent to a baghouse for PM control. Records of all maintenance performed on the baghouse shall be kept. [06-096 CMR 115, BACT]

B. Emissions shall not exceed the following: [06-096 CMR 115, BACT]

Emission Unit	Pollutant	lb/hr
Milled Material and Dust Recovery Cyclones (from the baghouse stack)	PM/PM_{10}	0.5

C. Visible emissions from the baghouse shall each not exceed 10% opacity on a six (6) minute block average. [06-096 CMR 101, BACT]

(18) **Fugitive Emissions**
Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(19) **General Process Sources**
Visible emissions from any general process source (conveyor, hopper, etc…) shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(20) MWP shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 12th DAY OF MARCH, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/17/2007
Date of application acceptance: 1/15/2008

Date filed with the Board of Environmental Protection: March 13, 2008

This Order prepared by Jonathan Voisine, Bureau of Air Quality.